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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/587,667

06/08/2007

Michael Gilge

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09/29/2009

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EXAMINER

TREAT, WILLIAM M

ART UNIT

PAPER NUMBER

2181

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/587,667	Applicant(s) GILGE, MICHAEL	
	Examiner William M. Treat	Art Unit 2181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/18/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. Claims 14-33 are presented for examination.
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 14-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilge (DE 101 53 484 A1) in view of Martin (Local Area Networks).
4. The reasons for rejecting claims 14-28 over Gilge (DE 101 53 484 A1) in view of Martin (Local Area Networks), in the examiner's previous action, continue and are hereby incorporated by reference.
5. In the examiner's judgment what applicant has done is apply a known technique to improve a known device to yield predictable results. According to MPEP 2143 (EXEMPLARY RATIONALES (D)) when making a rejection based on such a rationale, the examiner must first articulate a finding that the prior art contained a base device upon which the claimed invention can be seen as an improvement. Applicant makes this point in paragraph [0009] of their specification. "In particular, the signal processors or a subset of the signal processors are linked to one another via the network having a star-shaped topology. It is thereby possible to exchange data between individual signal processors, in particular all signal processors being able to communicate with one another at the same time. Because of that, it is possible to implement the system described in German Patent Application No. **DE 101 53 484** using a plurality of

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processing devices and an evaluating device, coupled to the processing devices, in a simple and cost-effective manner.”

6. It could easily be argued that if one looks at Fig. 2, one sees the invention of claims 14, 16, and 22-26: a data gathering/data processing device for video/audio signals, comprising: a plurality of signal processors (46, 48), and an evaluation device (72) configured to analyze output of at least a subset of the signal processors, the evaluation device and the at least a subset of the signal processors each forming a link in a network have (*sic*) a star-shaped topology. Note that the signal processors (46, 48) link the audio and visual sensors to the digital lines (68, 70) which connect to the central point or hub of the star shaped network (i.e., the evaluation device (72)) which links the signal processors (46, 48), the storage device (74), and the digital network (36). Fig. 1 shows how one can assign two signal processors to one audio/video connection. However, a real weakness of the star-shaped network of Fig. 2 is that the evaluation device must not only evaluate data but balance network traffic, record network data, perform network error checking and correction, adapt to increased workload from additional devices, be reprogrammed to meet new communication standards, etc. This is a significant workload for one device requiring an expensive processor which must be reprogrammed and/or replaced to adapt to changing conditions resulting in a high-cost product which is less competitive commercially.

7. There exists a known technique (for example, a backbone Ethernet switch which can act as the central point of a star-shaped network or a backbone Ethernet hub which can act as the central point of a star-shaped network) to improve such a device.

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8. Martin taught LAN's have been used to implement alarm and security systems (p. 8) so there is motivation to use a LAN. In fact, Ethernet is now the most pervasive communications technology in use today. On pages 192 and 193 Martin discusses LANs based on wiring closets which is relevant to applicant's situation where applicant, to market security systems, is faced with the task of wiring buildings. Martin teaches that, "in many cases, the best solution to local area network wiring is to create a star-wired configuration". On those pages he depicts an Ethernet LAN configured as a star network with the network acting as the backbone of the system depicted. He also depicts a backbone Ethernet hub which forms a smaller, star-shaped network which permits, potentially, five processors to communicate with each other and with the rest of the Ethernet network. The examiner also takes Official Notice of the fact that at the time of applicant's filing of his invention there existed backbone Ethernet switches which could act as the central point of a star-shaped network and which could connect that network to a digital network such as the Internet. For most Ethernet applications the switch had replaced the hub at the time of applicant's invention because of the greater processing capabilities of the switch coupled with a dramatic drop in the cost of switches.

9. Use of, for example, a backbone Ethernet switch to replace the evaluation device (72) as the central point of the star shaped network of Fig. 2 offers significant advantages for the invention depicted in Figure 2. First, a significant workload is lifted from the evaluation processor (72) while still providing all the connectivity of the system of Fig. 2. The switch can balance network traffic, provide access recording devices for

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all processors, perform network error checking and correction, adapt to increased workload from additional devices, be inexpensively replaced or have the software updated by the manufacturer to meet new communication standards, etc. This permits a less expensive processor to be used as the evaluation device and/or more sophisticated evaluations to be done using the freed processing power. Because Ethernet technology is so pervasive new products are frequently coming to market with enhanced speed and processing capabilities for less cost ultimately lowering the overall system cost for applicant's product. Ease of installation of a small system with graceful growth as the system evolves, ease of reconfiguration and maintenance, and high reliability also argue in favor of using a backbone Ethernet switch as the central point in the star network in place of the evaluation processor (72) in Fig. 2. One of ordinary skill would have readily recognized that the substitution of a conventional backbone Ethernet switch for the evaluation processor (72) as the central point of the star network of Fig. 2 would have yielded predictable results and one of the results would have been an improved system.

10. In response to the rejection, above, applicants argue on behalf of their claims: (a) "The Gilge system does not form a star network"; (b) "the Final Office Action conclusorily asserts that the evaluation device must balance network traffic, record network data, perform network error checking and correction, adapt to increased workload from additional devices, and be reprogrammed to meet new communication standards. Support for these features simply does not exist in the "Gilge" reference. Instead, any review of this reference makes plain that the evaluation device is merely a

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processing device which receives certain inputs and produces certain outputs.

Therefore, the purported motivation for replacing the evaluation device with a different device that includes the purported features, i.e., a central hub/switch, also does not exist;" (c) "With respect to the assertion that replacing the evaluation device with a central switch/hub yields predictable results, the advantageous results purportedly provided by the central switch/hub simply do not apply to the evaluation device of the '°Gilge" reference. As explained above, features such as balancing network traffic, recording network data, performing network error checking, and adapting to increased workload, are not found in the evaluation device -- nor is there any apparent need for these features in Gilge's system;" (d) "Further still, there is no indication that any usage of the central switch/hub would lift a significant workload from or free processing power of the evaluation device. Regardless of whether it is replaced with the central switch/hub, the evaluation device would still have to perform the processing of the audio/visual signals produced by the various processors as well as output to the data storage device and the digital network. That is, the evaluation device would perform the same amount of work;" and (e) "As to the assertions that the central switch/hub lowers overall system cost, facilitates ease of installation, reconfiguration and maintenance, and is more reliable, the Final Office Action does not explain how adding more components (the central switch/hub) would lower costs. Further, if the evaluation device and the central switch/hub as are interchangeable as asserted, there is no reason to assume that the central switch/hub is more reliable or easily installed/reconfigured/maintained than the evaluation device."

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11. As to 11(a), the Dictionary of Computers, Information Processing & Telecommunications by Rosenberg defines a star network as "a network configuration in which there is only one path between a central or controlling node and each end-point node. There is only one path between each end-point node (46, 48, 38, and 74) and the central/controlling node (72) of the network depicted in Fig. 2 of the Gilge reference. I am sure applicants either understand Gilge in the original German or have an excellent translation of it, but to make the examiner's point clearer, he will recite some of the capabilities of the Gilge system as recited in the German language document. The central node (72) receives audio/visual data from end-point nodes (46,48) in a compressed format (for example, MPEG-2 or MPEG4) to preserve transmission bandwidth, decompresses the data, performs analyses on the data such as motion detection or facial feature analysis, etc., stores data to the end-point (74), reads data from the end-point (74) to be used in the analyses and/or be transmitted to the user over any one of numerous types of networks (Internet, Intranet, UMTS network, GSM network, ISDN network, etc.) at end-point node (38), selects data for transmission to the user at end-point node (38), receives commands from the user at end-point node (38) to control the devices at end-point nodes (46, 48), etc. Whether applicants chose to admit it or not, Fig. 2 of Gilge represents a star network for communication of data where there is only one path between each end-point node (46, 48, 38, and 74) and the central/controlling node (72) of the network. The premise (i.e., "the Gilge system does not form a star network"), upon which applicants have sought to argue for the patentability of their claims, is false.

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12. As to 11(b), Gilge discusses his system being used with LANs, WANs, Internet, Intranet, UMTS network, GSM network, ISDN network, etc. The examiner takes Official Notice of the fact that it is conventional with such networks that records are kept, at least temporarily of data that is transmitted so that it can be retransmitted if there is an error in transmission. Data which is received over such networks is error checked. Data sent over such networks is encoded so it can be error checked. The standards have evolved over time as technology has changed. The two end-point nodes (46,48) inputting data the central/controlling node (72) are not limited by Gilge to being hardwired to node (72) nor are they limited to two in number by Gilge. If Gilge did not care if his invention became technologically obsolete and no longer viable in the marketplace, he would not need to update his software in his node (72) to accommodate changes in communications standards, or he could get an Ethernet switch and implement a star network as the examiner explained. If Gilge did not wish to market to anything more than owners of parking lots that only needed a couple of cameras and microphones, he would never need to update his software to accommodate prioritizing the inputs and balancing the workload across, potentially, multiple processors to accept and expeditiously process data from the myriad sensors, cameras, microphones, etc. needed to monitor a large industrial or housing complex. If Gilge did not care if the shooting in the parking lot were dropped from the data transmitted to the user, node (72) would not need to check the messages from the nodes (46, 48) for transmission errors nor whether the user received the transmitted data nor whether the data was properly encoded so that transmission errors could be

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checked. A reasonable individual of ordinary skill in the art would certainly see the logic behind what applicants term the examiner's conclusions. There seems to be no logic behind applicants' assertion that the examiner provided no motivation for Gilge to modify his star network with an Ethernet switch.

13. As to 11(c), there is a need for the features mentioned in (evaluation device)/(control node/(72) as was explained by the examiner, *supra*. Unless applicants are prepared to argue Gilge was so foolish as to design a one-shot product that was not intended to evolve to accommodate changing telecommunications standards and technology, that did not concern itself with whether critical security data was lost, that did not intend to evolve beyond a small, niche, security market looking at small parking lots, etc., applicants' assertion that such capabilities were not needed by Gilge's system defies common sense.

14. As to 11(d), applicants' assertion that "the evaluation device would perform the same amount of work" is based on applicants' unsupported assertion that the (evaluation device)/(control node/(72) performs no tasks in support of the network. There is nothing in Gilge's disclosure related to Fig. 2 which supports such an assertion unless, as the examiner pointed out earlier, one assumes Gilge had no plans to upgrade his invention as standards and technology evolved or provide a reliable product or market to other than a small, niche market.

15. As to 11(e), applicants assertion that there is no reason to think providing that providing a star network based on an Ethernet switch as the hub would "lower costs" or "that the central switch/hub is more reliable or easily installed/reconfigured/maintained

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than the evaluation device" ignores the costs of paying staff to program, construct, and support appropriate unique network systems for all levels of performance consistent with the marketing plan for Gilge's system, the costs to test the software and hardware for reliability, the costs to test the hardware and software for reliability within the software environment(s) of the operating system and evaluation software of the Gilge system, the costs to balance and rebalance the workload with the Gilge system to be sure the needs of the networking system are met in real-time as well as meeting the security-evaluation system needs in real time. The marketing strength and expertise behind Gilge's system seems to rest in the security arena. The marketing strength and expertise of Ethernet switch manufacturers lies in their networking and switching technology. Applicants seem to be making an argument that with their new product/invention (i.e., the modification of Gilge's system to provide a star network with a hub switch) was merely whim for which there is no useful purpose since it is not an improvement on a known invention nor a useful improvement of any kind. Such an argument would seem to present 35 USC 101 problems.

16. Applicant's claims 20 and 21 mention an housing and which elements of applicant's invention are either internal or external to the housing. This differentiation does not represent patentable subject matter. Otherwise, anyone capable of creating an electronics cabinet could create an invention by merely leaving one or more elements outside of the cabinet and any patent applicant received would be worthless. Also, incorporating all elements into a package to be delivered as a standalone system to an unsophisticated customer means that the customer need only be concerned with a

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few connections, etc. and can still have a rather sophisticated system. Also, situating the switch in a system externally would mean the system could easily have a key component upgraded to provide higher processing speeds and greater switching capabilities without altering the basic product container. These are all motivations for such housing configurations that one of ordinary skill would readily recognize.

17. The examiner has explained that applicant has applied a known technique to improve a known device in a predictable manner. He has explained his finding that the prior art contained an appropriate base device upon which the claimed invention can be seen as an improvement, his finding that the prior art contained a known technique that is applicable to the device, his finding that one of ordinary skill would have recognized that applying the known technique to the base device would have yielded predictable results and an improved system. The fact that the technique was known and the results were thoroughly predictable is further attested to by the fact applicant has no detailed drawings related to the network and how it would be implemented using hub, switch, Ethernet backbone, etc. nor does the disclosure present such information. There is only a single, simple figure accompanied by a limited description.

18. Claims 29-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilge (DE 101 53 484 A1) in view of Martin (Local Area Networks) and further in view of Han (Publication No. 20040264493).

19. Gilge and Martin taught the invention of claim 14 from which claim 33 depends as well as the concept, reiterated in claim 33, of internal communication between the plurality of signal processors occurs over a digital network coupled to the network

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having a star-shaped topology (see the previous rejection of claims 14-28). Gilge taught at least two of the plurality of signal processors are connected to the same signal source and at least two of the plurality of signal processors are respectively configured to perform a different signal processing upon a signal received from the signal source. Han taught that at the time of applicant's invention it was known in the art that Ethernet switches had the capability for a plurality of signal processors to communicate with one another in full duplex mode and for at least a subset of the plurality of signal processors to be assigned a specific bandwidth (paragraphs [0105], [0106], and [0107] and claims 1, 11, 13, and 39).

20. As to claims 29-32, they fail to teach or define over rejected claims 14-28 and 33.

21. Applicant's arguments filed 9/8/2009 have been fully considered but they are not persuasive. See the rejection of applicants' claims presented above.

22. Any inquiry concerning this communication should be directed to William M. Treat at telephone number (571) 272-4175.

23. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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/William M. Treat/

Primary Examiner, Art Unit 2181